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| Mr. Michael T. Davis  Pre-Calculus | | 3.10 Unit 3 Review and Practice Text  March 14, 2016 | |
| Name: | |

**3.1** Simplify each expression. Give each answer without negative exponents.

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| 1. Simplify | 1. Simplify | 1. Simplify |
| 1. Simplify | 1. Simplify | 1. Simplify |
| 1. Simplify | 1. Simplify | 1. Simplify |
| 1. Write  in exponential form | 1. Write  in exponential form | 1. Write  in exponential form |

**3.2** Fill-in the y-values (outputs). Plot the points and graph the function. Some points may not fit on the grid provided.

1. 

|  |  |
| --- | --- |
| X | Y |
| - 3 |  |
| - 2 |  |
| - 1 |  |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |

Fill-in the y-values (outputs). Plot the points and graph the function. Some points may not fit on the grid provided.

1. 

|  |  |
| --- | --- |
| X | Y |
| - 3 |  |
| - 2 |  |
| - 1 |  |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |

Fill-in the y-values (outputs). Plot the points and graph the function. Some points may not fit on the grid provided.

3. 

|  |  |
| --- | --- |
| x | Y |
| 0.125 |  |
| 0.25 |  |
| 0.5 |  |
| 1 |  |
| 2 |  |
| 4 |  |
| 8 |  |

Fill-in the y-values (outputs). Plot the points and graph the function. Some points may not fit on the grid provided.

1. 

|  |  |
| --- | --- |
| X | Y |
| 0.125 |  |
| 0.25 |  |
| 0.5 |  |
| 1 |  |
| 2 |  |
| 4 |  |
| 8 |  |

* 1. Evaluate each logarithmic expression:

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* 1. Use the properties of logarithms to EXPAND the following expressions (do not evaluate):

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Use the properties of logarithms to CONDENSE the following expressions (do not evaluate):

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**3.5**  Evaluate each logarithmic expression:

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| --- | --- |
|  |  |
| 1. If , then | 1. If , then |
| 1. If  & , then | 1. If  & , then |
| 1. True or False:   If , then | 1. True or False:   If , then |
|  |  |

* 1. Solve each exponential equation WITHOUT a calculator.

1. 
2. 
3. 
4. 
5. True or False: 

**3.7** Solve each exponential equation WITH a calculator.

1. 
2. 
3. 
4. 
5. 
6. 

**3.8** Use the change of base formula to rewrite each log expression in terms of base 10. Then, use a calculator to evaluate the expression if necessary (in #’s 3-6)

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Use the change of base formula to rewrite each log expression in terms of base . Then, use a calculator to evaluate the expression if necessary (in #’s 7, 8, 9, 10)

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**3.9** Solve each equation without a calculator.

1. Solve for x: 
2. Solve for x: 
3. Solve for x: 
4. Solve for x: 
5. Solve for x: 
6. Solve for x: 
7. Solve for y in terms of x: 
8. Solve for y in terms of x: 
9. Solve for y in terms of x: 
10. Solve for y in terms of x: 
11. Solve for x: 
12. Solve for x: 
13. Solve for x: 